

Designer Stabilizer for Preparation of Pristine Graphene/Polysiloxane Films and Networks

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Supporting Information

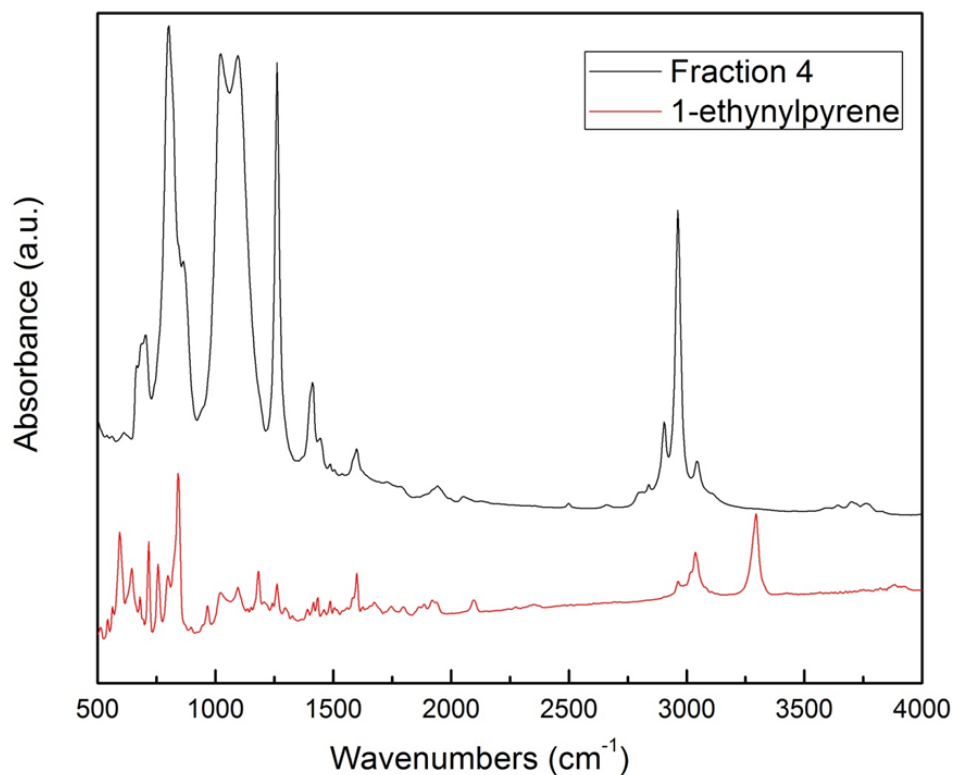


Figure S1. FT-IR spectra of fraction 4 of the PMPyS sample.

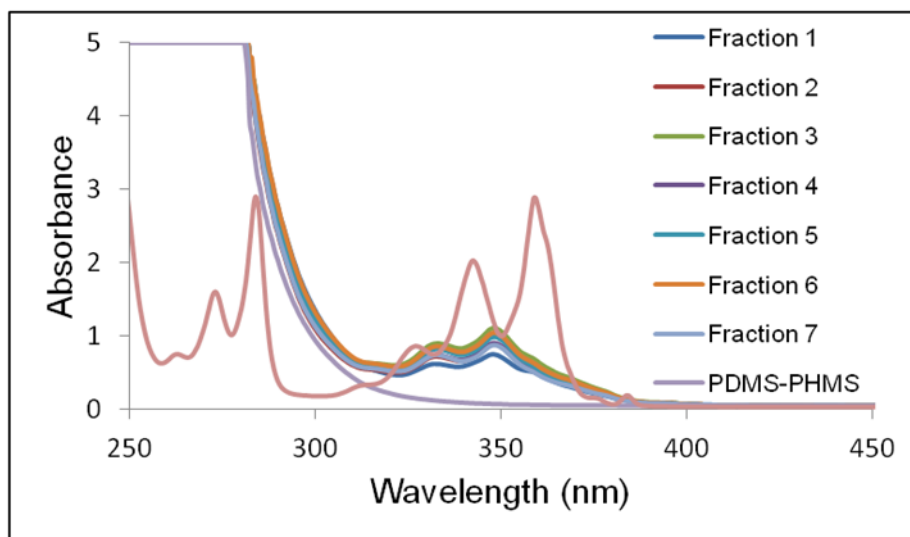


Figure S2. UV-vis spectra of the polymer precursors and PMPyS fractions.

	Fraction 1	Fraction 2	Fraction 3	Fraction 4	Fraction 5	Fraction 6	Fraction 7
Pyrene content (wt%)	8.43	9.57	16.85	8.86	12.91	13.89	10.58

Table S1. Pyrene content of different PMPyS fractions (based on the area under UV-vis spectra of each fraction)

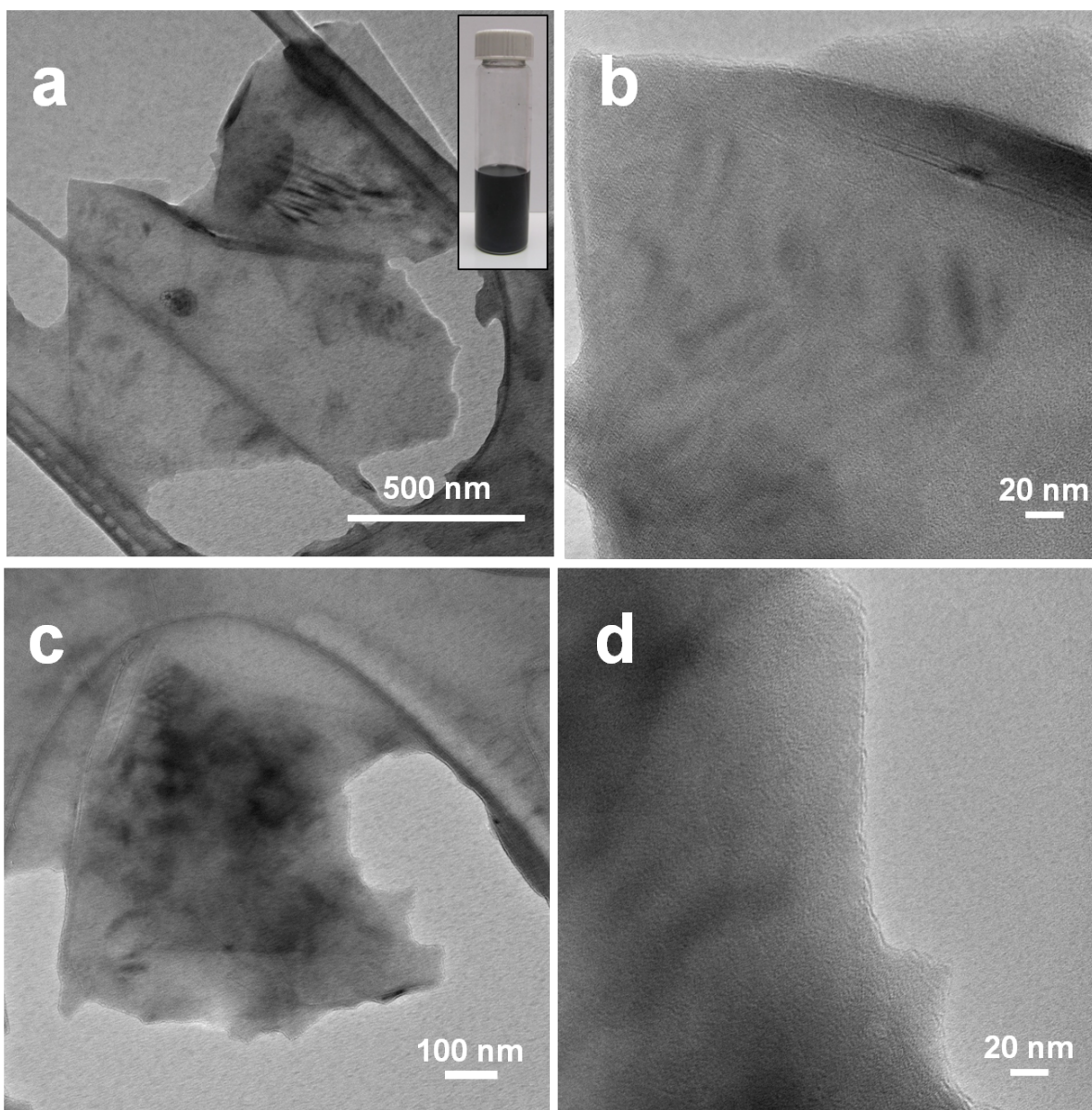


Figure S3. (a) and (c) Additional TEM images of the graphene sheets in the dispersion obtained from fraction 3 of the PMPyS polymers; inset is the graphene dispersion prepared by fraction 3 of PMPyS, (b) and (d) the edge of the same graphene sheets which shows the few-layer nature of the PDMS-stabilized graphene in the dispersion.

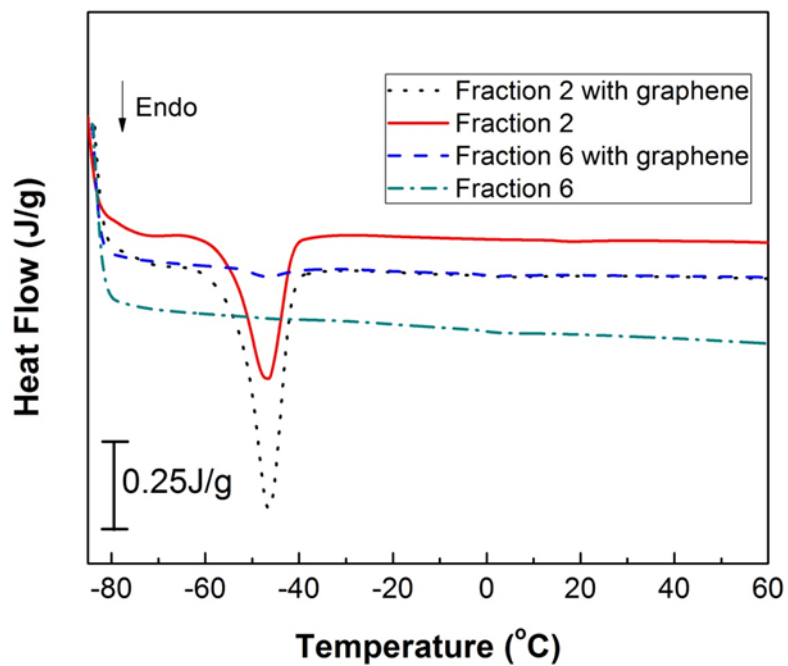


Figure S4. DSC heating traces for fractions 2 and 6 of PMPyS and PMPyS-G samples.

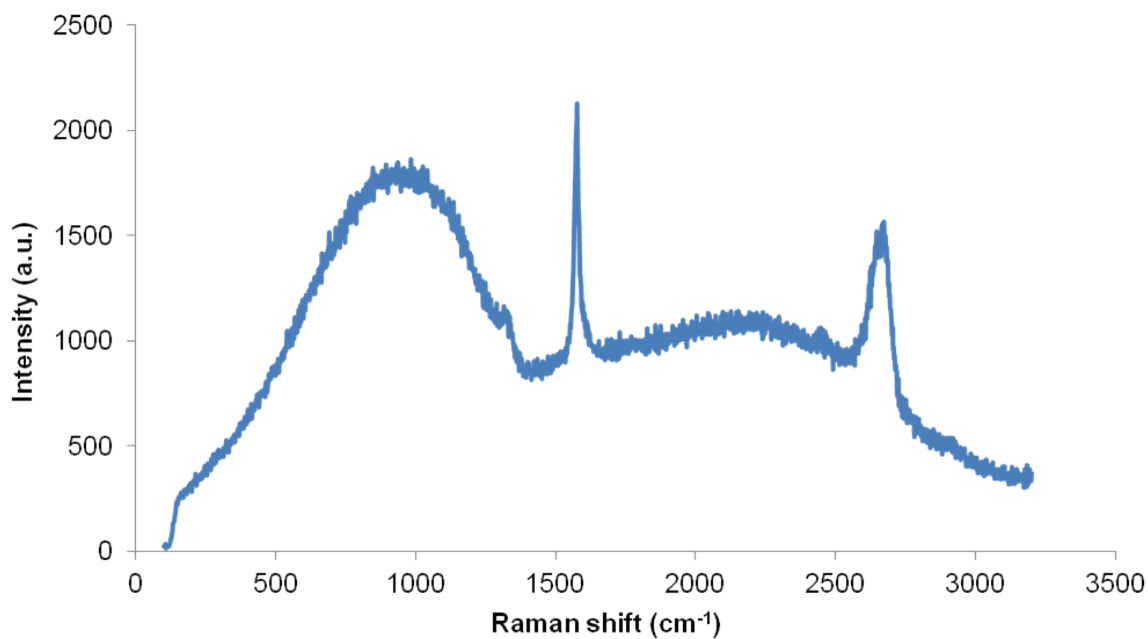


Figure S5. Raman Spectrum of PMPyS-G (fraction 4).

The Raman spectrum was measured on a Renishaw Raman microscope using a 633 nm He-Ne laser. To prepare the sample, the dispersion of PMPyS-G (fraction 4) in chloroform was cast on a filtration membrane. The spectrum shows two main peaks at ~ 1580 and 2680 cm^{-1} corresponding to the G and 2D bands. The G band represents the sp^2 -hybridized carbon bonds and 2D band is the characteristic band which shows the thickness of the graphene sheets.